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APR 25 1997

Federal Communications Commission
Office of Secretary

WRITER'S TELEPHONE

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April 25, 1997

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, DC 20554

Re: IB Docket No. 96-220
Notice of Ex Parte Presentation

Dear Mr. Caton:

Leo One USA Corporation ("Leo One USA"), by its attorneys, hereby notifies the Commission, pursuant to Section 1.1206 of the Commission's rules, that it participated in a meeting with Commission staff on April 24, 1997 concerning the above-referenced proceeding. The following members of the staff participated:

Peter Cowhey
Ruth Milkman
Thomas Tcyz
Cassandra Thomas
Daniel Connors
Harry Ng
Julie Garcia

The purpose of the meeting was to discuss sharing in the 137 and 400 MHz bands. A copy of the material distributed during that meeting is attached. An original and one copy of this notice are being submitted to the Secretary's Office. Copies of this letter are being provided to the members of the staff named above.

Any questions regarding this matter should be directed to the undersigned.

Respectfully submitted,

Robert A. Mazer

Robert A. Mazer
Counsel for Leo One USA Corporation

Attachment

No. of Copies rec'd 0+1
List ABCDE

# The Leo One Business Approach/Plan

- Principles are service providers
- Technical partners
  - 40+ people w/over 400 yrs exp in satellite design, construction, operation
  - numerous US satellite programs & previous 25+ smallsat constellation
- System architecture methodology
  - studied the market to develop customer requirements
  - market requirements defined system design - 100% availability

# General Sharing Issues in the Downlink Band Plans

- Sharing with Metsats - 137 MHz & 400 MHz bands
  - Requires presheduled avoidance of Metsat footprint
    - 137 MHz NOAA channels btemporary : 400 MHz permanent
- Sharing with Starsys - 137 MHz band
  - Requires coordination of interfering power levels or
  - Requires prescheduled avoidance of Gateway antenna main beam

# Implications of Sharing to Service Provision

- Leo One USA devised technique to share with DMSP Metsats
  - achieves high availability - near 100%
  - transparent to subscriber equipment - zero cost impact
    - hopping vs nonhopping - zero impact to cost at scale
    - and already hop to avoid self interference
- Final Analysis declines to adopt frequency agility
  - states maximum availability if sharing with a single Metsat system is 65%

# Impact of A/B Band Plan

- Accommodates requirements of all new entrants
- System A supports Leo One USA availability but suffers ~ 16 % reduction in capacity
- System B - can accommodate B1, B2, B3
  - B1: FAI operates in NOAA TIP/APT channels
    - achieves higher service availability for FAI than operating in System A
  - B2: CTA operates in LRPT spectrum
  - B3: E-SAT spreads across the band

# Impact of X/Y Band Plan

- Leo One USA outages preclude implementation
- Requires Final Analysis to share with Metsats permanently - max 65% availability
- Greatly complicates sharing for current licensees, new licensees, and government users
- Orbcomm expands and preference over NOAA channels
- Starsys super priority status in coordination

# Band Plan Impact - Ability to Serve Target Markets

| A/B | X/Y |
|---|---|
| **Availability** | |
| • CTA (100% of mod plan) | • CTA (100% of mod plan) |
| • E-SAT (100% of filed) | • E-SAT (100% of filed) |
| • Leo One USA (~100% of filed) | • N/A |
| • Final Analysis (~100% of filed) | • Final Analysis (significantly reduced) |
| **Capacity** | |
| • CTA/E-SAT (~100% of req) | • CTA/E-SAT (~100% of req) |
| • Leo One USA (~16% reduction) | • N/A |
| • Final Analysis (~7% reduction) | • Final Analysis (~32% reduction) |

# Public Interest Implications

- X/Y Plan - 3 new entrants
  - lower availability markets - 3 new entrants
  - high availability markets - no new entrants (FAI limited to 65%)
    - remains monopoly or duopoly
  - highest availability markets - no service
- A/B Plan - 4 new entrants
  - lower availability markets - 4 new entrants
  - high availability markets - two new entrants
    - 3 or 4 providers
  - highest availability markets - new service
- A/B Plan results in most beneficial market structure
  - If the DOJ Merger Guidelines were applied, a transition from an A/B to an X/Y market structure would support an antitrust review

# Steps to Resolve Proceeding

- Defer current licensees' request for expansion
  - equal rights to additional spectrum after new entrants satified
- Apply strict financial qualifications
- Prioritize request for A, B1, B2, B3 by qualification status
- If no resolution
  - apply public interest criteria or
  - proceed to auction

# Charts

- Glossy of Leo One and DMSP footprints
  - Use in conjunction with slide 4
- Band Plan Illustration
  - possibly use in transition from slide 4 to 5
- Plot of FAI performance with NOAA/Starsys sharing
  - Use in conjunctin with slide 5
- CTA Letter to Leo One USA and Filing to the Commission supporting A/B Plan - also others statements on A/B in comments if positive
  - produce with slide 7

# HHI Analysis

## Potential Licensing Outcomes

**1** Today's environment

| Licensee | Orbcomm, Starsys & VITA each fully deploy licensed systems | | | VITA operates in specialized non-for-profit market | | | Starsys fails to launch its system | | | Neither VITA or Starsys participate in the market | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI |
| Orbcomm | 1 | 76.51% | 5854 | 1 | 80.00% | 6400 | 1 | 94.61% | 8951 | 1 | 100.00% | 10000 |
| Starsys | 0.25 | 19.13% | 366 | 0.25 | 20.00% | 400 | 0 | 0.00% | 0 | | 0.00% | 0 |
| VITA | 0.057 | 4.36% | 19 | 0 | 0.00% | 0 | 0.057 | 5.39% | 29 | | 0.00% | 0 |
| | 1.31 | | 6239 | 1.25 | | 6800 | 1.06 | | 8980 | 1.00 | | 10000 |
| | Market Concentration | | 6239 | Market Concentration | | 6800 | Market Concentration | | 8980 | Market Concentration | | 10000 |

**2** No new licensing, Orbcomm 2nd round ammendment is accepted.

| Licensee | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orbcomm | 1.16 | 79.07% | 6253 | 1.16 | 82.27% | 6768 | 1.16 | 95.32% | 9085 | 1.16 | 100.00% | 10000 |
| Starsys | 0.25 | 17.04% | 290 | 0.25 | 17.73% | 314 | 0 | 0.00% | 0 | | 0.00% | 0 |
| VITA | 0.057 | 3.89% | 15 | 0 | 0.00% | 0 | 0.057 | 4.68% | 22 | | 0.00% | 0 |
| | 1.47 | | 6558 | 1.41 | | 7083 | 1.22 | | 9107 | 1.16 | | 10000 |
| | Market Concentration | | 6558 | Market Concentration | | 7083 | Market Concentration | | 9107 | Market Concentration | | 10000 |

**3** Three additional licenses awarded as proposed in Systems X, Y by the Parties.

| Licensee | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orbcomm | 1.16 | 42.23% | 1783 | 1.16 | 43.12% | 1860 | 1.16 | 46.46% | 2158 | 1.16 | 47.54% | 2260 |
| Starsys | 0.25 | 9.10% | 83 | 0.25 | 9.29% | 86 | | 0.00% | 0 | | 0.00% | 0 |
| VITA | 0.057 | 2.07% | 4 | | 0.00% | 0 | 0.057 | 2.28% | 5 | | 0.00% | 0 |
| ESAT | 0.02 | 0.73% | 1 | 0.02 | 0.74% | 1 | 0.02 | 0.80% | 1 | 0.02 | 0.82% | 1 |
| FAI | 0.9 | 32.76% | 1073 | 0.9 | 33.46% | 1119 | 0.9 | 36.04% | 1299 | 0.9 | 36.89% | 1361 |
| CTA | 0.36 | 13.11% | 172 | 0.36 | 13.38% | 179 | 0.36 | 14.42% | 208 | 0.36 | 14.75% | 218 |
| | 2.75 | | 2944 | 2.69 | | 3066 | 2.50 | | 3463 | 2.44 | | 3621 |
| | Market Concentration | | 2944 | Market Concentration | | 3066 | Market Concentration | | 3463 | Market Concentration | | 3621 |

**4** Four additional licenses awarded as proposed in System A & B1, B2, B3 by Leo One USA.

| Licensee | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI | Capacity | Market Share | HHI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orbcomm | 1 | 28.51% | 813 | 1 | 28.99% | 840 | 1 | 30.70% | 943 | 1 | 31.25% | 977 |
| Starsys | 0.25 | 7.13% | 51 | 0.25 | 7.25% | 53 | | 0.00% | 0 | | 0.00% | 0 |
| VITA | 0.057 | 1.63% | 3 | | 0.00% | 0 | 0.057 | 1.75% | 3 | | 0.00% | 0 |
| System A | 0.9 | 25.66% | 659 | 0.9 | 26.09% | 681 | 0.9 | 27.63% | 764 | 0.9 | 28.13% | 791 |
| System B | 0.92 | 26.23% | 688 | 0.92 | 26.67% | 711 | 0.92 | 28.25% | 798 | 0.92 | 28.75% | 827 |
| System B1 | 0.36 | 10.27% | 105 | 0.36 | 10.43% | 109 | 0.36 | 11.05% | 122 | 0.36 | 11.25% | 127 |
| System B2 | 0.02 | 0.57% | 0 | 0.02 | 0.58% | 0 | 0.02 | 0.61% | 0 | 0.02 | 0.63% | 0 |
| | 3.51 | | 2319 | 3.45 | | 2394 | 3.26 | | 2630 | 3.20 | | 2721 |
| | Market Concentration | | 2319 | Market Concentration | | 2394 | Market Concentration | | 2630 | Market Concentration | | 2721 |